

## **401 KAR 59:174. Stage II controls at gasoline dispensing facilities.**

RELATES TO: KRS 224.01-010, 224.10-100, 224.20-100, 224.20-110, 224.20-120, 40 C.F.R. 51.126, 42 U.S.C. 7511a(b)(1)(A)

STATUTORY AUTHORITY: KRS 224.10-100(5), 42 U.S.C. 7409, 7410, 7511a(b)(3), 7521(a)(5), 7624, 7625, 40 C.F.R. 51.126

NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100(5) requires the Energy and Environment Cabinet to promulgate administrative regulations for the prevention, abatement, and control of air pollution. This administrative regulation establishes requirements for the control of emissions from gasoline dispensing facilities and the decommissioning of existing controls at gasoline dispensing facilities that are no longer environmentally beneficial.

Section 1. Definitions. Terms not defined in this section shall have the meaning established in 401 KAR 59:001. (1) "Average monthly throughput" means the total gallons of gasoline dispensed during the months of operation in the previous twelve (12) months, divided by the number of months of operation during those twelve (12) months.

(2) "Balance system" means a Stage II vapor recovery system that uses direct displacement to force vapor out of the receiving container and back into the space of the container from where the liquid product was withdrawn.

(3) "Boot" means an accordion-like tubular cover used over the spout of a gasoline nozzle to provide a return-path for gasoline vapors displaced during refueling.

(4) "CARB" means the California Air Resources Board.

(5) "CARB certification" means a document such as an executive order or approval letter provided by CARB or by an equivalent authority that certifies that a vapor recovery system or system components achieve at least a ninety-five (95) percent reduction in the VOC emissions during refueling, and that identifies the performance standards required for the system or system components. An executive order may also identify the range of permissible components, permissible construction configurations, and the required tests for compliance.

(6) "Coaxial hose" means a hose-within-a-hose that provides separate passages for the flow of gasoline and vapor return.

(7) "Decommission" means to render inoperable a stage II vapor recovery system.

(8) "Dry break" means a spring-loaded valve that prevents vapor from escaping through the vapor recovery riser pipe opening of a storage tank.

(9) "Equivalent authority" means an authority recognized by the cabinet and by the U.S. EPA as having a program for certification of vapor recovery systems equivalent to that of CARB.

(10) "Existing gasoline dispensing facility" means a facility that commenced dispensing gasoline prior to January 1, 2016.

(11) "Faceplate" means a soft, donut-shaped device attached to the boot of a balance nozzle that forms a tight seal with the vehicle fill pipe during refueling.

(12) "Facility" or "gasoline dispensing facility" means a site, except a farm not engaged in the sale of gasoline, where gasoline is transferred from a stationary storage tank to a motor vehicle fuel tank.

(13) "Facility representative" means a facility employee who has been trained to serve at that facility as prescribed in Section 5 of this administrative regulation.

(14) "Flexible cone" means a cone-shaped device attached to the boot of a vacuum-assist nozzle that prevents too low a vacuum from forming in the vehicle fuel tank.

(15) "Leak" means liquid or vapor loss from the gasoline dispensing system or vapor recovery system as determined by visual inspection or operation of the equipment.

(16) "Modification" or "modify" means:

(a) The repair, replacement, or upgrade of a facility's Stage II equipment at a cost equal to seventy-five (75) percent or more of the cost of a total system replacement at modification; or

(b) A change, such as the removal of a CARB certified component and the addition or removal of piping or fittings, which may cause the vapor recovery system to be incapable of maintaining an overall control efficiency of at least a ninety-five (95) percent reduction in the VOC emissions.

(17) "Month" means calendar month.

(18) "Month of operation" means a month during which a facility is not closed for the purpose of dispensing gasoline for more than four (4) consecutive days.

(19) "Motor vehicle" means a vehicle, machine, or mechanical contrivance propelled by an internal combustion engine and licensed for operation and operated upon the public highways.

(20) "New gasoline dispensing facility" means a facility that commenced dispensing gasoline on or after January 1, 2016.

(21) "Stage I vapor recovery system" means a vapor recovery system certified by CARB or by an equivalent authority to reduce the emissions of VOCs by ninety-five (95) percent or more during the transfer of gasoline to a stationary storage tank at a facility.

(22) "Stage II vapor recovery system" means a vapor recovery system certified by CARB or by an equivalent authority to reduce the emissions of VOCs during the refueling of a motor vehicle at a facility by ninety-five (95) percent or more.

(23) "Storage tank" means a tank at a gasoline dispensing facility that is used for the storage of gasoline.

(24) "Vacuum assist system" means a Stage II vapor recovery system that uses a vacuum inducing device to collect vapor from the receiving container and direct it back into the space of the container from where the liquid product was withdrawn.

Section 2. Applicability. (1) This administrative regulation shall apply to the owner or operator of a gasoline dispensing facility located in a county in which the entire county, as of January 12, 1998, was designated severe, serious, or moderate nonattainment for ozone pursuant to 401 KAR 51:010, Attainment status designations, except as exempted in Section 9 of this administrative regulation.

(2) Subject to the compliance timetable specified in Section 8 of this administrative regulation, an owner or operator of an existing gasoline dispensing facility shall not transfer or allow the transfer of gasoline from a storage tank at that facility into a motor vehicle fuel tank unless the displaced vapors are collected by a Stage II vapor recovery system and the requirements of this administrative regulation are met.

(3) A new gasoline dispensing facility, and an existing gasoline dispensing facility after decommissioning has been completed, shall not be subject to the requirements of Sections 3 through 10 of this administrative regulation.

Section 3. Registration and Notification Requirements. The owner or operator shall submit registration and notification forms to the Division for Air Quality as specified in this section. (1) Registration of facilities. DEP 7105, Gasoline Dispensing Facility Registration Form, shall be submitted at least thirty (30) days prior to installing or modifying a Stage II vapor recovery system.

(2) Compliance test notification. DEP 7105A, Compliance Test Notification Form, shall be submitted at least thirty (30) days prior to the performance of the compliance tests required in Section 6 of this administrative regulation.

(3) Stage II post inspection report. DEP 7105B, Stage II Post Inspection Form, shall be

submitted within ten (10) work days after the applicable compliance tests have been performed.

(4) Notice of Intent to Decommission Stage II Controls and Decommission Plan Form. A completed DEP 7105C, Notice of Intent to Decommission Stage II Controls and Decommission Plan Form shall be filed at least thirty (30) calendar days prior to commencing any decommissioning activity. If a change occurs to the submitted plan, a revision shall be filed at least ten (10) calendar days prior to commencing any decommissioning activities.

(5) Notice of Status of Decommissioning of Stage II Control Form. A completed DEP 7105D, Notice of Status of Decommissioning of Stage II Controls Form, shall be filed within ten (10) days after commencing decommissioning. If decommissioning is not completed within ten (10) days after commencing, an additional DEP 7105D form shall be submitted.

Section 4. Control Measures and Operating Requirements. (1) The Stage II vapor recovery system shall:

- (a) Be designed and operated to be at least ninety-five (95) percent effective in recovering displaced vapors;
- (b) Be certified by CARB or an equivalent authority;
- (c) Employ only coaxial hoses at the dispensers;
- (d) Contain no components that would impede the performance of the functional or compliance tests of the system;
- (e) Be integrated with a Stage I vapor recovery system; and
- (f) Meet the testing requirements contained in Section 6 of this administrative regulation.

(2) The owner or operator shall comply with the operational restrictions established in paragraphs (a) through (d) of this subsection for the Stage II vapor recovery system.

(a) The system shall be installed, operated, and maintained in accordance with the manufacturer's specifications and the applicable certification granted by CARB.

(b) The system shall be free of defects listed in this subsection. The facility representative shall inspect the equipment daily for these defects. If a defect is discovered, through this inspection or otherwise, an "Out of Order" sign shall be posted, and the defective equipment shall be rendered inoperable. Defects shall include:

1. The absence or disconnection of any component that is part of the Stage II vapor recovery system;
2. The use of equipment not in accord with the system certification;
3. A vapor hose that is crimped or flattened so that:
  - a. The vapor passage is completely blocked; or
  - b. The pressure drop through the vapor hose is greater than two (2) times the certification requirements;
4. A boot that is torn in one (1) or more of the following ways:
  - a. A triangular shaped or similar tear more than one-half (1/2) inch on a side;
  - b. A hole more than one-half (1/2) inch in diameter; or
  - c. A slit more than one (1) inch in length;
5. A faceplate or flexible cone on a boot that is damaged so that the ability to achieve a seal with a fill pipe interface is impaired for at least one-quarter (1/4) of the total circumference of the faceplate or flexible cone;
6. A malfunctioning nozzle shutoff mechanism;
7. Vapor return lines, including components such as swivels, antirecirculation valves, and underground piping, that malfunction or are blocked, or are restricted so that the pressure drop through the line is greater than two (2) times the certification requirement;
8. An inoperative vapor processing unit;

9. An inoperative vacuum producing device;
10. An inoperative pressure/vacuum relief valve, vapor check valve, or dry break;
11. Leaks; and
12. An equipment defect that substantially impairs the control efficiency of the system.

(c) A defect in a component of the Stage II vapor recovery system that is not listed in paragraph (b) of this subsection shall not prevent operation but shall be repaired or replaced within fifteen (15) days after being identified as defective.

(d) If the cabinet identifies a defect specified in paragraph (b) of this subsection, the cabinet shall affix a tag to the defective equipment stating that the equipment is out of order. The tag shall not be removed until the cabinet has been notified that the defect has been corrected, and the tagged equipment has been approved for use by the cabinet pursuant to paragraph (b) of this subsection.

(3) The owner or operator shall ensure that safe access to the system components and monitoring equipment is maintained for inspection and compliance determination by the cabinet.

(4) The owner or operator shall display instructions for dispensing gasoline on or near each dispenser, in a print type and size that is easily readable, which include at a minimum:

- (a) A description of how to use the equipment;
- (b) A warning not to dispense fuel after automatic shutoff; and
- (c) A telephone number established by the cabinet to report problems with equipment.

(5) At least one (1) person at the facility shall be trained pursuant to Section 5 of this administrative regulation.

Section 5. Training of Facility Representative. (1) The owner or operator shall ensure that at least one (1) person at the facility is trained to operate the vapor recovery system. The facility representative shall not be required to be present at the facility at all times, but shall perform or oversee the daily inspection of vapor recovery equipment for the defects listed in Section 4(1)(b) of this administrative regulation.

(2) Training may be provided by the vapor recovery equipment manufacturer or distributor, by the person constructing or modifying the Stage II vapor recovery system, by a trained facility representative, or by training manuals provided by the manufacturer, distributor, or the person constructing or modifying the Stage II vapor recovery system. If training manuals are used, they shall be kept at the facility and made available to the cabinet upon request.

(3) Training shall include the following topics:

- (a) Purposes of the Stage II vapor recovery program;
- (b) Operation of the vapor recovery system at that facility;
- (c) Daily equipment inspections;
- (d) How to repair or replace faulty equipment without voiding the equipment warranties;
- (e) Procedures for posting and removing "Out of Service" signs;
- (f) The executive orders of CARB (or the equivalent authority certifying the system), the range of components certified for use in the system, and the requirements placed on the owner or operator;
- (g) Maintenance schedules and requirements for the system and its components; and
- (h) Equipment warranties.

(4) The training shall include a practical demonstration on how to operate and inspect the equipment and how to perform a start-up and shut-down of the facility.

(a) This demonstration may be performed at another facility with a similar vapor recovery system.

(b) The cabinet may require that this demonstration be witnessed by the cabinet as a condi-

tion for compliance.

(5) The owner or operator shall maintain a record for each facility representative that includes:

- (a) The name of the facility representative and the date training was received;
  - (b) Proof of attendance and successful completion of training; and
  - (c) If applicable, the date the facility representative left the employ of the owner or operator.
- (6) The owner or operator shall not operate the facility for more than thirty (30) consecutive days without a facility representative.

Section 6. Compliance Demonstration Test. (1) Within sixty (60) days after the installation or modification of a Stage II vapor recovery system, the owner or operator shall comply with the applicable test procedures specified in this subsection. The methods by which the tests specified in this subsection are to be conducted are set forth in Stationary Source Test Methods, Volume 2, Certification and Test Procedures for Vapor Recovery Systems, April 12, 1996.

(a) A leak test shall be performed in accordance with the applicable procedure specified in this paragraph. The vapor recovery system shall comply with the leak rate criteria specified in the applicable test procedure.

1. Vapor Recovery Test Procedure TP-201.3, Determination of Two (2) Inch (WC) Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities;

2. Vapor Recovery Test Procedure TP-201.3A, Determination of Five (5) Inch (WC) Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities; or

3. Vapor Recovery Test Procedure TP-201.3B, Determination of Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities with Above-ground Storage Tanks.

(b) A dynamic back pressure test shall be performed in accordance with Vapor Recovery Test Procedure TP-201.4, Determination of Dynamic Pressure Performance of Vapor Recovery Systems of Dispensing Facilities.

1. The cabinet may require that this test be conducted simultaneously on all the nozzles of a dispenser for which gasoline can be dispensed simultaneously.

2. The vapor recovery system shall comply with the maximum allowable average dynamic pressures given in the test procedure.

(c) Vapor Recovery Test procedure TP-201.5, Determination (by Volume Meter) of Air to Liquid Volume Ratio of Vapor Recovery Systems of Dispensing Facilities, shall be performed for a system if required by the applicable CARB certification. The vapor recovery system shall comply with the criteria specified in the test procedure.

(d) Vapor Recovery Test Procedure TP-201.6, Determination of Liquid Removal of Phase II Vapor Recovery Systems of Dispensing Facilities, shall be performed for a system if required by the applicable CARB certification. The vapor recovery system shall comply with the criteria specified in the test procedure.

(2) At intervals not to exceed five (5) years, the owner or operator shall demonstrate compliance with the requirements of the applicable test procedure specified in subsection (1)(a) of this section. The notification requirements of Section 3(2) of this administrative regulation shall apply for these tests.

(3) The cabinet may require the owner or operator to perform other tests if necessary to demonstrate the adequacy of a vapor recovery system.

Section 7. Recordkeeping Requirements. (1) The owner or operator shall maintain the following documents:

- (a) Current CARB certification for the Stage II vapor recovery system installed at the facility;
- (b) Proof of training for the current facility representative; and

(c) Test results that verify that the vapor recovery system meets or exceeds the requirements of the compliance tests required in Section 6 of this administrative regulation.

(2) The following records shall be maintained for a period not less than three (3) years:

(a) A log of the quantity of gasoline delivered to the facility during each month;

(b) A log of maintenance records including any repaired or replacement parts and description of the problem;

(c) Inspection reports issued by the cabinet, kept in chronological order;

(d) Compliance records including warnings or notices of violation issued by the cabinet, kept in chronological order; and

(e) The facility representative record specified in Section 5(3) of this administrative regulation.

(3) Records shall be kept current and made available to the cabinet upon request.

Section 8. Compliance Timetable. The owner or operator of an existing gasoline dispensing facility that is not exempt from this administrative regulation pursuant to Section 9 of this administrative regulation shall comply with this administrative regulation as established in this section. (1) The owner or operator shall commence decommissioning of the facility's Stage II vapor recovery system pursuant to Section 10 of this administrative regulation on or after January 1, 2016.

(2) The owner or operator shall complete decommissioning of the facility's Stage II vapor recovery system on or before December 31, 2018.

(3) The owner or operator shall comply with all sections of this administrative regulation unless and until the decommissioning of the facility's Stage II vapor recovery system is complete.

Section 9. Exemptions. (1) The fuels and facilities specified in this subsection shall be exempt from this administrative regulation.

(a) Diesel fuel and kerosene. These fuels shall not be used in calculating the average monthly throughput to determine the applicability of this administrative regulation.

(b) A facility with an average monthly throughput of 25,000 gallons or less. This exemption shall cease to apply if the average monthly throughput exceeds 25,000 gallons prior to January 1, 2016, at which time facilities that were exempt before January 1, 2016, based on their average monthly throughput, shall continue to be exempt from this administrative regulation, and the throughput limitation shall no longer apply.

(c) A facility located in an air quality control region which has implemented a Stage II program that has been approved by the U.S. EPA.

(2) Recordkeeping for exempted facilities. An exempted facility shall maintain records for a period not less than two (2) years that demonstrate that the facility's average monthly throughput has not exceeded the applicable throughput limit until January 1, 2016, after which time exempted facilities shall no longer be required to maintain records that demonstrate that the facility's average monthly throughput has not exceeded the applicable throughput limit.

Section 10. Decommissioning. (1) The decommissioning procedure for a Stage II vapor recovery system shall be consistent with the procedure as described in Chapter 14 of the Petroleum Equipment Institutes Recommended Practices for Installation and Testing of Vapor Recovery Systems at Vehicle Refueling Sites, PEI/RP300-09.

(2) The decommissioning procedure shall include:

(a) Initiating safety procedures;

(b) Relieving pressure in the tank ullage;

(c) Draining all liquid collection points;

- (d) Protecting against electrical hazards by disconnecting all Stage II electrical components;
- (e) Reprogramming the electronics in the dispenser to indicate that Stage II vapor recovery is not in service;
- (f) Sealing off vapor piping located below grade and below the level of the dispenser base in a secure manner;
- (g) Sealing off vapor piping located below grade at the tank end, if reasonably accessible, in a secure manner;
- (h) Sealing of vapor piping located inside the dispenser cabinet in a secure manner;
- (i) Replacing Stage II vapor recovery-type hanging hardware with conventional-type hanging hardware;
- (j) Installing pressure and vacuum vent valves as appropriate;
- (k) Removing all Stage II instructions from all dispenser cabinets;
- (l) Conducting appropriate testing, including pressure decay and tie-tank tests;
- (m) Verifying that all visible storage system components will not release any vapors or liquids; and
- (n) Restoring the gasoline dispensing facility back to operational status.

(3) Decommissioning, including all required testing, shall be completed within sixty (60) days of commencement of decommissioning.

(a) If decommissioning, including all required testing, is not completed within sixty (60) days of commencing decommissioning, lock-outs and "Out of Service" tags shall be installed on all gasoline dispensers that have not been decommissioned until decommissioning is completed.

Section 11. Incorporation by Reference. (1) The following material is incorporated by reference:

- (a) "DEP 7105, Gasoline Dispensing Facility Registration", August 1997;
- (b) "DEP 7105A, Compliance Test Notification", August 1997;
- (c) "DEP 7105B, Stage II Post Inspection Form", August 1997;
- (d) "DEP 7105C, Notice of Intent to Decommission Stage II Controls and Decommission Plan Form", May 2015;
- (e) "DEP 7105D, Notice of Status of Decommissioning of Stage II Controls Form", May 2015;
- (f) "Petroleum Equipment Institute's Recommended Practices for Installation and Testing of Vapor Recovery Systems at Vehicle Refueling Sites, PEI/RP300-09", 2009; and
- (g) "Stationary Source Test Methods, Volume 2, Certification and Test Procedures for Vapor Recovery Systems", April 12, 1996. This document is also available from the California Air Resources Board, P.O. Box 2815, 2020 L St., Sacramento, California 95812, Phone: (916) 322-2990.

(2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Division for Air Quality, 300 Sower Boulevard, Frankfort, Kentucky 40601, Monday through Friday, 8 a.m. to 4:30 p.m. (24 Ky.R. 802; 1295; 1503; eff. 1-12-1998; TAm eff. 12-5-2006; TAm eff. 8-9-2007, TAm eff. 5-20-2010; 42 Ky.R. 1341; 2327; eff. 3-4-2016; TAm eff. 7-8-2016; Crt eff. 11-21-2018.)